CONTENTS OF VOLUME 29

Number 1

The Description of the High-Temperature Plasticity of Metals by Stochastic Processes	1
Temperature Field Due to Multipass Welding of Radioactive Waste Containers	21
Instability of a Circumferential Crack in a Piping System Subject to Bending and Tensile Loadings	31
Boundary Integral Method for Torsion of Composite Shafts S. I. CHOU & J. A. MOHR (USA)	41
Structural Problems of the NET Basic Machine	57
Fatigue Analysis of Crack-like Geometrical Discontinuities	79
Announcements	95
Number 2	
Approximate Seismic Analysis of Piping or Equipment Mounted on Elastoplastic Structures	97
Evaluation of a Thermal Qualification Data Base	121
Creep-Fatigue Behavior of $2\frac{1}{4}$ Cr-1 Mo Steel in Air and Vacuum T. ASAYAMA (Japan), S-Z. CHENG (People's Republic of China), Y. ASADA, S. MITSUHASHI & Y. TACHIBANA (Japan)	129
The Viability of the K_{Ia} Procedure for Predicting Crack Arrest under Displacement Controlled Loadings	147
385	

Res Mechanica (29) (1990)—© 1990 Elsevier Science Publishers Ltd, England. Printed in Northern Ireland

. 153 Modal Analysis Using MDSI Method ROBERTO LEO & MAURIZIO MAZZOLI (Italy) The Chernobyl Accident: A Challenge on PSA as a Tool for the Prediction of Event Scenarios beyond the Design Basis and for Safety Improvements . . . 167 P. KAFKA (FRG) A Microstructural Approach to the Mechanical Response of a Class of Y. M. HADDAD (Canada) Number 3 A Dislocation Model for Creep in Engineering Materials 197 N. M. GHONIEM (USA), J. R. MATTHEWS (UK) & R. J. AMODEO (USA) The Governing Factors of Post-Cracking Behaviour of Reinforced Concrete 221 (Japan) Overview of Power Plant and Industrial Facility Performance in Earthquakes, 249 N. G. HORSTMAN, P. I. YANEV & D. L. McCORMICK (USA) Etude du Comportement Mécanique des Matériaux Biphasés au Moyen de la 257 LISE DURAND & CHRISTIAN THOMAS DE MONTPRÉVILLE (France) 287 Number 4 Irradiation Growth in Zirconium Alloys under High Fluences TOSHIO KUBO (Japan) Evaluation of Cumulative Damage Failure of a Reactor Feed Vertical Pump T. IWATSUBO (Japan) Test of Wall/Basemat Junction Region of a Prestressed Concrete Containment 329 N. W. HANSON, D. M. SCHULTZ, J. J. ROLLER & H. T. TANG (USA) Creep, High-cycle Fatigue and Cyclic Creep in Copper at 500 °C 345 P. LUKÁŠ, L. KUNZ & V. SKLENIČKA (Czechoslovakia) Obtaining the Specific Risk of Torsional Fracture Function of a Prismatic Bar G. DIAZ & P. KITTL (Chile) Relaxation of V-Belt Stresses 373 MARIAN DUDZIAK & MICHAŁ ANISIMOWICZ (Poland)

